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09/596,442	06/19/2000	Matthew R Perkins	CM03017J	4005

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James A Lamb
Motorola Inc
Intellectual Property Section Law Department
8000 West Sunrise Boulevard
Ft. Lauderdale, FL 33322

EXAMINER

LY, NGHI H

ART UNIT PAPER NUMBER

2617

DATE MAILED: 09/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/596,442

Applicant(s)

PERKINS ET AL.

Examiner

Nghi H. Ly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/03/06 has been entered.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1 and 11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter

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which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 1 and 11, the claims recite "the plurality of radios consisting of both mobile and static radios" and "gathering a communication connection statistic on the plurality of radios the communication connection statistic being gathered on both moving and non-moving radios". Respectively. Therefore, the claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-7, 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al (US 5,666,655) in view of Raith et al (US 5,081,671).

Regarding claim 1, Ishikawa teaches a method for accessing a radio communication system having a plurality of radios (see column 4, lines 54-57), comprising the steps of: (a) separating the plurality of radios into two or more groups (column 22, lines 18-20, see "dividing"), (b) gathering a communication statistic on the

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plurality of radios (Ishikawa, column 22, lines 18-38, see *"dividing the mobile stations into a plurality of groups according to the features of the mobile stations such as distances."* However, column 16, lines 53-56, Ishikawa further discloses that *"the distance of the mobile station 12 from the base station 11 is estimated by measuring the reception level at the base station 11 of the radio wave transmitted from the mobile station 12."* Or the mobile stations of Ishikawa are divided into groups based on distance, however, the distance based on the reception level. Therefore, the teaching of Ishikawa inherently teaches the mobile stations are divided into groups based on **reception level**, and Ishikawa's "**reception level**" reads on applicant's **statistic**. In addition, Applicant's specification page 2, lines 22-25 discloses statistic could be signal strength, and Ishikawa's "**reception level**" reads on Applicant's "**signal strength**") and c) grouping of radios based on the communication statistic gathered in step (b) (also see column 22, lines 18-22 and Examiner's answer above).

Ishikawa does not specifically disclose the plurality of radios consisting of both mobile and static radios.

Raith (US 5,081,671) teaches the plurality of radios consisting of both mobile and static radios (see column 2, lines 29-33, see *"mobileses may be stationary or moving"*).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the teaching of Raith into the system of Ishikawa so that handover can be performed for stationary or moving mobile stations.

The combination of Ishikawa and Raith (US 5,081,671) does not specifically disclose reconfiguring the grouping of radios. However, since the distances (see

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Ishikawa, column 16, lines 53-56, the distance based on reception level. Therefore, mobile stations are divided into groups based on reception level), *the moving directions, and the moving speeds of the mobile station* in the system of Ishikawa varies at time, it would have been obvious to one of the ordinary skill in the art to modify Ishikawa and Raith (US 5,081,671) such that the group of mobile units are reconfiguring, so that the groups can be associated with the *changing distances, the moving directions, and the moving speeds of the mobile station*.

Regarding claim 2, Ishikawa further teaches comprising the step of: (d) allowing access to the radio communication system based on the grouping of the radios (see column 22, lines 18-22).

Regarding claims 3-5 and 17, the combination of Ishikawa and Raith (US 5,081,671) teaches the communication statistic gathered in step (b) comprises the changing distances, the moving directions, and the moving speeds of the mobile station by each of the plurality of radios (see Ishikawa, column 22, lines 18-22) and reception level (see Ishikawa, column 16, lines 53-56). The combination of Ishikawa and Raith (US 5,081,671) does not specifically disclose communication statistic gathered in step (b) comprises the average channel usage, or channel accesses per unit time, or priority or talk-time by each of the plurality of radios. However, those skilled in the art would have appreciated that the system of Ishikawa also be used with other statistic such as average channel usage, or channel accesses per unit time, or priority or talk-time by each of the plurality of radios.

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the teaching of Ishikawa and Raith (US 5,081,671), so that the communication statistic comprises more features.

Regarding claim 6, Ishikawa further teaches the communication statistic gathered in step (b) comprises the average received signal strength of each of the plurality of radios (Ishikawa, column 22, lines 18-38, see “*dividing the mobile stations into a plurality of groups according to the features of the mobile stations such as distances.*” However, column 16, lines 53-56, Ishikawa further discloses that “*the distance of the mobile station 12 from the base station 11 is estimated by measuring the reception level at the base station 11 of the radio wave transmitted from the mobile station 12.*” Or the mobile stations of Ishikawa are divided into groups based on distance, however, the distance based on the reception level. Therefore, the teaching of Ishikawa inherently teaches the mobile stations are divided into groups based on **reception level**, and Ishikawa’s “**reception level**” reads on applicant’s **statistic**. In addition, Applicant’s specification page 2, lines 22-25 discloses statistic could be signal strength, and Ishikawa’s “**reception level**” reads on Applicant’s “**signal strength**”).

Regarding claim 7, Ishikawa teaches steps b and d. Ishikawa inherently teaches repeating steps (b) through (d) periodically (see rejection of claim 1 above). Since *the distances* (see column 16, lines 53-56, the distance based on reception level. Therefore, mobile stations are divided into groups based on reception level), *the moving directions, and the moving speeds of the mobile station* in the in system of Ishikawa varies at time, it would have been obvious to one of the ordinary skill in the art to modify

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Ishikawa such that repeating steps (b) through (d) periodically, so that the groups can be associated with the *changing distances, the moving directions, and the moving speeds of the mobile station* (see column 22, lines 18-22).

Regarding claim 9, Ishikawa further teaches the step (b) is performed by a radio communication system controller (see column 7, lines 48-55).

7. Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al (US 5,666,655) in view of Raith et al (US 5,081,671) and further in view of Muller (US 6,438,375).

Regarding claim 8, the combination of Ishikawa and Raith (US 5,081,671) teaches a method as defined in claim 1. The combination of Ishikawa and Raith (US 5,081,671) does not specifically disclose the two or more groups of radios established in step (a) can access the radio communication system at specified times which are different for each of the two or more groups.

Muller teaches the two or more groups of radios established in step (a) can access the radio communication system at specified times which are different for each of the two or more groups (see column 3, lines 10-14).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the teaching of Muller into the system of Ishikawa and Raith (US 5,081,671) in order to provide a method and apparatus for efficiently communicating different types of control message between a radio network and a mobile radio station (see Muller, column 1, lines 5-10).

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Regarding claim 10, Ishikawa further teaches a step (b) is performed by each of the plurality of radios (see Ishikawa, FIG.1, mobile station 12).

8. Claims 11, 13, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al (US 5,666,655) in view of Raith et al (US 5,081,671) and further in view of Muller (US 6,438,375) and Grubeck et al (US 6,449,484).

Regarding claim 11, Ishikawa teaches a method for accessing a radio communication system having a plurality of radios (see column 4, lines 54-57), comprising the steps of: (a) separating the plurality of radios into two or more groups (column 22, lines 18-20, see "dividing"), (b) gathering a communication statistic on the plurality of radios (Ishikawa, column 22, lines 18-38, see "*dividing the mobile stations into a plurality of groups according to the features of the mobile stations such as distances.*" However, column 16, lines 53-56, Ishikawa further discloses that "*the distance of the mobile station 12 from the base station 11 is estimated by measuring the reception level at the base station 11 of the radio wave transmitted from the mobile station 12.*" Or the mobile stations of Ishikawa are divided into groups based on distance, however, the distance based on the reception level. Therefore, the teaching of Ishikawa inherently teaches the mobile stations are divided into groups based on **reception level**, and Ishikawa's "**reception level**" reads on applicant's **statistic**. In addition, Applicant's specification page 2, lines 22-25 discloses statistic could be signal strength, and Ishikawa's "**reception level**" reads on Applicant's "**signal strength**") and c) grouping of

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radios based on the communication statistic gathered in step (b) (also see column 22, lines 18-22 and Examiner's answer above).

The combination of Ishikawa does not specifically disclose the plurality of radios consisting of both moving and non-moving radios.

Raith (US 5,081,671) teaches the plurality of radios consisting of both moving and non-moving radios (see column 2, lines 29-33, see "mobiless may be stationary or moving").

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the teaching of Raith (US 5,081,671) into the system of Ishikawa so that handover can be performed for stationary or moving mobile stations.

The combination of Ishikawa and Raith (US 5,081,671) does not specifically disclose (d) allowing access to the radio communication system by each of the two or more groups of radios at different predetermined periods of time.

Muller teaches (d) allowing access to the radio communication system by each of the two or more groups of radios at different predetermined periods of time (see column 3, lines 10-14).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the teaching of Muller into the system of Ishikawa and Raith (US 5,081,671) in order to provide a method and apparatus for efficiently communicating different types of control message between a radio network and a mobile radio station (see Muller, column 1, lines 5-10).

The combination of Ishikawa, Raith (US 5,081,671) and Muller does not specifically disclose sharing a communication channel, and each of the two or more groups of radios at different predetermined periods of time thereby minimizing channel access collision.

Grubeck teaches sharing a communication channel (see column 1, lines 5-10), and each of the two or more groups of radios at different predetermined periods of time thereby minimizing channel access collision (see column 1, lines 5-10, Grubeck teaches "over a period of time", Grubeck inherently teaches "minimizing channel access collision").

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the teaching of Grubeck into the system of Ishikawa, Raith (US 5,081,671) and Muller in order to provide a solution to the problem of optimally assigning several simultaneous mobile stations to the channels of a base station (see Grubeck, column 3, lines 7-9).

Ishikawa, Raith (US 5,081,671), Muller and Grubeck does not specifically disclose reconfiguring the grouping of radios. However, since the *distances, the moving directions, and the moving speeds of the mobile station* in the system of Ishikawa varies at time, it would have been obvious to one of the ordinary skill in the art to modify Ishikawa such that the group of mobile units are reconfiguring, so that the groups can be associated with the *changing distances, the moving directions, and the moving speeds of the mobile station*.

Regarding claim 13, Ishikawa teaches steps (b) and (c) are repeated periodically. Ishikawa inherently teaches repeating steps (b) through (d) periodically (see rejection of claim 1 above). Since *the distances, the moving directions, and the moving speeds of the mobile station* in the in system of Ishikawa varies at time, it would have been obvious to one of the ordinary skill in the art to modify Ishikawa such that repeating steps (b) through (d) periodically, so that the groups can be associated with the *changing distances, the moving directions, and the moving speeds of the mobile station* (see column 22 lines 18-22).

Regarding claim 14, Ishikawa further teaches the communication statistic in step (b) is gathered by a central radio communication system resource (see column 1, lines 22-32).

Regarding claim 16, Ishikawa further teaches the steps (b) and (c) are performed at predetermined periods of time (see column 4, lines 33-53).

9. Claims 12 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al (US 5,666,655) in view of Raith (US 5,081,671) and further in view of Muller (US 6,438,375), Grubeck et al (US 6,449,484) and Official notice.

Regarding claim 12, the combination of Ishikawa, Raith (US 5,081,671), Muller and Grubeck teaches a method as defined in claim 11. The combination of Ishikawa, Raith (US 5,081,671), Muller and Grubeck does not specifically disclose the radio communication system comprises a time division multiple access radio communication system. However, the Examiner takes Official Notice that such time division multiple

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access radio communication system as recited in the claim are known in the art in order to save radio spectrum and permit many simultaneous conversations over a finite frequency.

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the teaching of Ishikawa, Raith (US 5,081,671), Muller and Grubeck for providing a method as claimed, in order to save radio spectrum and permit many simultaneous conversations over a finite frequency.

Regarding claim 18, the combination of Ishikawa, Raith (US 5,081,671), Muller and Grubeck teaches the communication statistic gathered in step (b) comprises the changing distances, the moving directions, and the moving speeds of the mobile station by each of the plurality of radios (see Ishikawa, column 22, lines 18-22). The combination of Ishikawa, Raith (US 5,081,671), Muller and Grubeck does not specifically disclose communication statistic gathered in step (b) comprises the talk-time by each of the plurality of radios. However, those skilled in the art would have appreciated that the system of Ishikawa, Raith (US 5,081,671), Muller and Grubeck also be used with other statistic such as the talk-time associated with each of the plurality of radios.

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the teaching of the combination of Ishikawa, Raith (US 5,081,671), Muller and Grubeck, so that the communication statistic comprises more features.

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10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al (US 5,666,655) in view of Raith (US 5,081,671) and further in view of Muller (US 6,438,375) and Raith (US 6,385,461).

Regarding claim 15, the combination of Ishikawa, Raith (US 5,081,671), Muller and Grubeck teaches a method as defined in claim 11. The combination of Ishikawa, Raith (US 5,081,671), Muller and Grubeck does not specifically disclose the communication statistic in step (b) is gathered by each of the plurality of radios.

Raith teaches the communication statistic in step (b) is gathered by each of the plurality of radios (see column 2 lines 33-36 and lines 62-65).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the teaching of Raith into the system of Ishikawa, Raith (US 5,081,671), Muller and Grubeck in order to individual users with the opportunity to joint group calls at any time (see Raith (US 6,385,461), column 2 lines 25-27).

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (571) 272-7911. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nghi H. Ly

A handwritten signature in black ink, appearing to read 'NHLy', located below the printed name 'Nghi H. Ly'.